



PCT

RAW SEQUENCE LISTING

DATE: 08/26/2004

PATENT APPLICATION: US/09/674,368B

TIME: 17:11:36

Input Set : A:\PTO.FG.txt

Output Set: N:\CRF4\08262004\I674368B.raw

3 <110> APPLICANT: American Cyanamid Company
 5 <120> TITLE OF INVENTION: Vaccines Containing Recombinant Pilin Against Neisseria gonorrhoeae or
 6 Neisseria meningitidis
 W--> 7 <130> FILE REFERENCE: 33377-00/PCT
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/674,368B
 C--> 9 <141> CURRENT FILING DATE: 2000-10-27
 9 <160> NUMBER OF SEQ ID NOS: 24
 11 <170> SOFTWARE: PatentIn version 3.1
 13 <210> SEQ ID NO: 1
 14 <211> LENGTH: 504
 15 <212> TYPE: DNA
 16 <213> ORGANISM: Artificial
 18 <220> FEATURE:
 19 <221> NAME/KEY: CDS
 20 <222> LOCATION: (1)..(501)
 21 <223> OTHER INFORMATION: Chimeric of Neisseria meningitidis Class I and Neisseria gonorrhoeae

ENTERED

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 25 atg gat acc ctt caa aaa ggc ttt acc ctt atc gag ctg atg att gtg 48
 26 Met Asp Thr Leu Gln Lys Gly Phe Thr Leu Ile Glu Leu Met Ile Val
 27 1 5 10 15
 29 atc gcc atc gtc ggc att ttg gcg gca gtc gcc ctt ccc gcc tac caa 96
 30 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln
 31 20 25 30
 33 gac tac acc gcc cgc gcg caa gtt tcc gaa gcc atc ctt ttg gcc gaa 144
 34 Asp Tyr Thr Ala Arg Ala Gln Val Ser Glu Ala Ile Leu Leu Ala Glu
 35 35 40 45
 37 ggt caa aaa tca gcc gtt acc gag tat tac ctg aat cac ggc gaa tgg 192
 38 Gly Gln Lys Ser Ala Val Thr Glu Tyr Tyr Leu Asn His Gly Glu Trp
 39 50 55 60
 41 ccc ggc aac aac act tct gcc ggc gtg gca tct tct tca aca atc aaa 240
 42 Pro Gly Asn Asn Thr Ser Ala Gly Val Ala Ser Ser Ser Thr Ile Lys
 43 65 70 75 80
 45 ggc aaa tat gtt aag gaa gtt aca gtc gca aac ggc gtc att acc gcc 288
 46 Gly Lys Tyr Val Lys Glu Val Thr Val Ala Asn Gly Val Ile Thr Ala
 47 85 90 95
 49 aca atg ctt tca agc ggc gta aac aaa gaa atc caa ggc aaa aaa ctc 336
 50 Thr Met Leu Ser Ser Gly Val Asn Lys Glu Ile Gln Gly Lys Lys Leu
 51 100 105 110
 53 tcc ctg tgg gcc aag cgt caa gac ggt tcg gta aaa tgg ttc tgc gga 384
 54 Ser Leu Trp Ala Lys Arg Gln Asp Gly Ser Val Lys Trp Phe Cys Gly
 55 115 120 125
 57 cag ccg gtt acg cgc acc gac gcc aaa gcc gac acc gtc gcc gcc gcc 432

58 Gln Pro Val Thr Arg Thr Asp Ala Lys Ala Asp Thr Val Ala Ala Ala

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59      130      135      140
61 gcc aag acc gcc gac aac atc aac acc aag cac ctg ccg tca acc tgc      480
62 Ala Lys Thr Ala Asp Asn Ile Asn Thr Lys His Leu Pro Ser Thr Cys
63 145      150      155      160
65 cgc gac gca agt gat gcc agc taa      504
66 Arg Asp Ala Ser Asp Ala Ser
67      165
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 167
72 <212> TYPE: PRT
73 <213> ORGANISM: Artificial
W--> 74 <220> FEATURE:
W--> 76 <221> NAME/KEY: amino acid
77 <222> LOCATION: (1)..(167)
78 <223> OTHER INFORMATION: Chimeric of Neisseria meningitidis Class I and Neisseria
gonorrhoeae
80 <400> SEQUENCE: 2
82 Met Asp Thr Leu Gln Lys Gly Phe Thr Leu Ile Glu Leu Met Ile Val
83 1      5      10      15
86 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln
87      20      25      30
90 Asp Tyr Thr Ala Arg Ala Gln Val Ser Glu Ala Ile Leu Leu Ala Glu
91      35      40      45
94 Gly Gln Lys Ser Ala Val Thr Glu Tyr Tyr Leu Asn His Gly Glu Trp
95      50      55      60
98 Pro Gly Asn Asn Thr Ser Ala Gly Val Ala Ser Ser Ser Thr Ile Lys
99 65      70      75      80
102 Gly Lys Tyr Val Lys Glu Val Thr Val Ala Asn Gly Val Ile Thr Ala
103      85      90      95
106 Thr Met Leu Ser Ser Gly Val Asn Lys Glu Ile Gln Gly Lys Lys Leu
107      100      105      110
110 Ser Leu Trp Ala Lys Arg Gln Asp Gly Ser Val Lys Trp Phe Cys Gly
111      115      120      125
114 Gln Pro Val Thr Arg Thr Asp Ala Lys Ala Asp Thr Val Ala Ala Ala
115      130      135      140
118 Ala Lys Thr Ala Asp Asn Ile Asn Thr Lys His Leu Pro Ser Thr Cys
119 145      150      155      160
122 Arg Asp Ala Ser Asp Ala Ser
123      165
126 <210> SEQ ID NO: 3
127 <211> LENGTH: 510
128 <212> TYPE: DNA
129 <213> ORGANISM: Artificial
131 <220> FEATURE:
132 <221> NAME/KEY: CDS
133 <222> LOCATION: (1)..(507)
134 <223> OTHER INFORMATION: Chimeric of Neisseria meningitidis Class II and Neisseria
gonorrhoeae
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140 Met Glu Ala Ile Gln Lys Gly Phe Thr Leu Ile Glu Leu Met Ile Val

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141 1          5          10          15
143 atc gcc atc gtc ggt atc ttg gca gcc gtc gcc ctg ccc gca tac caa      96
144 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln
145          20          25          30
147 gac tac acc gcg cgc gcc caa atg tcc gaa gcc ctg act ttg gca gaa      144
148 Asp Tyr Thr Ala Arg Ala Gln Met Ser Glu Ala Leu Thr Leu Ala Glu
149          35          40          45
151 ggt caa aaa tcc gca gtg atc gag tat tat tcc gac aac ggc aca ttc      192
152 Gly Gln Lys Ser Ala Val Ile Glu Tyr Tyr Ser Asp Asn Gly Thr Phe
153          50          55          60
155 ccg aac agc aat act tcc gca ggt att gct gcc tct aac gag att aaa      240
156 Pro Asn Ser Asn Thr Ser Ala Gly Ile Ala Ala Ser Asn Glu Ile Lys
157 65          70          75          80
159 ggt aag tat gtg gca tcg gtt aag gtt gaa ggt aat gcc tct gtt gct      288
160 Gly Lys Tyr Val Ala Ser Val Lys Val Glu Gly Asn Ala Ser Val Ala
161          85          90          95
163 tct att acc gct acc atg aac tct agt aat gtg aat aag gac atc aaa      336
164 Ser Ile Thr Ala Thr Met Asn Ser Ser Asn Val Asn Lys Asp Ile Lys
165          100          105          110
167 ggt aaa acc ttg gta ctc gtc ggc aaa caa aac tcc ggt tcg gta aaa      384
168 Gly Lys Thr Leu Val Leu Val Gly Lys Gln Asn Ser Gly Ser Val Lys
169          115          120          125
171 tgg ttc tgc gga cag ccg gtt acg cgc gac aac gcc gac aac gac gac      432
172 Trp Phe Cys Gly Gln Pro Val Thr Arg Asp Asn Ala Asp Asn Asp Asp
173          130          135          140
175 gtc aaa gac gcc ggc aac aac ggc atc gaa acc aag cac ctg ccg tca      480
176 Val Lys Asp Ala Gly Asn Asn Gly Ile Glu Thr Lys His Leu Pro Ser
177 145          150          155          160
179 acc tgc cgc gat acg tca tct gat gcc aaa      510
180 Thr Cys Arg Asp Thr Ser Ser Asp Ala
181          165
184 <210> SEQ ID NO: 4
185 <211> LENGTH: 169
186 <212> TYPE: PRT
187 <213> ORGANISM: Artificial
189 <220> FEATURE:
W--> 190 <221> NAME/KEY: amino acid
191 <222> LOCATION: (1)..(169)
192 <223> OTHER INFORMATION: Chimeric of Neisseria meningitidis Class II and Neisseria
gonorrhoeae
194 <400> SEQUENCE: 4
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197 1          5          10          15
200 Ile Ala Ile Val Gly Ile Leu Ala Ala Val Ala Leu Pro Ala Tyr Gln
201          20          25          30
204 Asp Tyr Thr Ala Arg Ala Gln Met Ser Glu Ala Leu Thr Leu Ala Glu
205          35          40          45
208 Gly Gln Lys Ser Ala Val Ile Glu Tyr Tyr Ser Asp Asn Gly Thr Phe
209          50          55          60
212 Pro Asn Ser Asn Thr Ser Ala Gly Ile Ala Ala Ser Asn Glu Ile Lys

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```

213 65          70          75          80
216 Gly Lys Tyr Val Ala Ser Val Lys Val Glu Gly Asn Ala Ser Val Ala
217          85          90          95
220 Ser Ile Thr Ala Thr Met Asn Ser Ser Asn Val Asn Lys Asp Ile Lys
221          100          105          110
224 Gly Lys Thr Leu Val Leu Val Gly Lys Gln Asn Ser Gly Ser Val Lys
225          115          120          125
228 Trp Phe Cys Gly Gln Pro Val Thr Arg Asp Asn Ala Asp Asn Asp Asp
229          130          135          140
232 Val Lys Asp Ala Gly Asn Asn Gly Ile Glu Thr Lys His Leu Pro Ser
233 145          150          155          160
236 Thr Cys Arg Asp Thr Ser Ser Asp Ala
237          165
240 <210> SEQ ID NO: 5
241 <211> LENGTH: 30
242 <212> TYPE: DNA
243 <213> ORGANISM: Neisseria gonorrhoeae
245 <400> SEQUENCE: 5
246 ccccgcgcca tggataccct tcaaaaaggc 30
249 <210> SEQ ID NO: 6
250 <211> LENGTH: 30
251 <212> TYPE: DNA
252 <213> ORGANISM: Neisseria gonorrhoeae
254 <400> SEQUENCE: 6
255 gggcctggat ccgtgggaaa tcacttacg 30
258 <210> SEQ ID NO: 7
259 <211> LENGTH: 29
260 <212> TYPE: DNA
261 <213> ORGANISM: Neisseria gonorrhoeae
263 <400> SEQUENCE: 7
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267 <210> SEQ ID NO: 8
268 <211> LENGTH: 27
269 <212> TYPE: DNA
270 <213> ORGANISM: Neisseria gonorrhoeae
272 <400> SEQUENCE: 8
273 ggctctagat tgaagcattt atcaggg 27
276 <210> SEQ ID NO: 9
277 <211> LENGTH: 28
278 <212> TYPE: DNA
279 <213> ORGANISM: Neisseria gonorrhoeae
281 <400> SEQUENCE: 9
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285 <210> SEQ ID NO: 10
286 <211> LENGTH: 28
287 <212> TYPE: DNA
288 <213> ORGANISM: Neisseria gonorrhoeae
290 <400> SEQUENCE: 10
291 ggctctagat tagaaaaact catcgagc 28

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Input Set : A:\PTO.FG.txt

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294 <210> SEQ ID NO: 11
295 <211> LENGTH: 36
296 <212> TYPE: DNA
297 <213> ORGANISM: Neisseria meningitidis Class I
299 <400> SEQUENCE: 11
300 ccccgcgcca tggacaccct tcaaaaaggt tttacc 36
303 <210> SEQ ID NO: 12
304 <211> LENGTH: 39
305 <212> TYPE: DNA
306 <213> ORGANISM: Neisseria meningitidis Class I
308 <400> SEQUENCE: 12
309 gggcctggat ccgagtggcc gtggaaaatc acttaccgc 39
312 <210> SEQ ID NO: 13
313 <211> LENGTH: 31
314 <212> TYPE: DNA
315 <213> ORGANISM: Neisseria meningitidis Class I
317 <400> SEQUENCE: 13
318 ccggcgcgtc tctcacggcg aatggcccg c 31
321 <210> SEQ ID NO: 14
322 <211> LENGTH: 39
323 <212> TYPE: DNA
324 <213> ORGANISM: Neisseria meningitidis Class I
326 <400> SEQUENCE: 14
327 gggcctggat ccgagtggcc gtggaaaatc acttaccgc 39
330 <210> SEQ ID NO: 15
331 <211> LENGTH: 25
332 <212> TYPE: DNA
333 <213> ORGANISM: Neisseria gonorrhoeae
335 <400> SEQUENCE: 15
336 gcataattcg tgctgctcaa ggcgc 25
339 <210> SEQ ID NO: 16
340 <211> LENGTH: 34
341 <212> TYPE: DNA
342 <213> ORGANISM: Neisseria gonorrhoeae
344 <400> SEQUENCE: 16
345 gccgcgcgctc tcccgatgatt caggtaatac tcgg 34
348 <210> SEQ ID NO: 17
349 <211> LENGTH: 25
350 <212> TYPE: DNA
351 <213> ORGANISM: Neisseria meningitidis Class I
353 <400> SEQUENCE: 17
354 gcataattcg tgctgctcaa ggcgc 25
357 <210> SEQ ID NO: 18
358 <211> LENGTH: 39
359 <212> TYPE: DNA
360 <213> ORGANISM: Neisseria meningitidis Class I
362 <400> SEQUENCE: 18
363 gggcctggat ccgagtggcc gtggaaaatc acttaccgc 39
366 <210> SEQ ID NO: 19

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/674,368B

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Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4

VERIFICATION SUMMARY

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Input Set : A:\PTO.FG.txt

Output Set: N:\CRF4\08262004\I674368B.raw

L:7 M:283 W: Missing Blank Line separator, <130> field identifier
L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:74 M:283 W: Missing Blank Line separator, <220> field identifier
L:76 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:2
L:190 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4